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CDM/ISEA Working Group Conference

SOFTWARE CONFIGURATION ON INITIATIVE

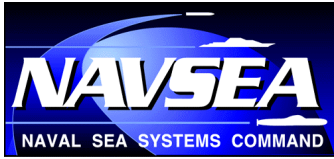
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BACKGROUND

- Need for a Navy Wide System to track Software Configurations
- NAVSEA 04L has CM Policy/Process responsibility
- CDMD-OA is the mandated CM repository for NAVSEA
- NAVSEA 04L developed policy/procedures & prototyped
 - TR01 Battle Force



REQUIREMENT

Accurate and comprehensive software configuration is essential to facilitate interoperability assessments, determine unit capabilities, and ensure appropriate training and support.

*CDMD-OA is the NAVSEA
mandated configuration
recording tool*



NAVSEA 04L

- Established process using CDMD-OA
 - Met with SSAs, ISEAs, CDMs, Program Managers and programmers
 - Developed initial software CM process
 - Defined CDMD-OA data elements to be used
 - Determined Record Types 2, 3 and 4 to be used
 - Record Type 5s can be used to transmit additional data to CDM
 - Reviewed process with programmers and SSAs/ISEAs/CDMs
 - Generated sample records to test process
 - Verified edit checks and formatted data entries (in use)



NAVSEA 04L

- Implemented on a limited basis
 - Decision - prototype process
 - Software CM Workshop - PHD NSWC
 - Kicked off Prototype
 - TR-01
 - 11 of 11 Ships participating
 - 21 of 25 Systems participating
 - 03 of 03 System Commands



PROCESS

- Use CDMD-OA RT2 , RT3, and RT4 records
 - RT2 for software versions - RT3 Logistics Support Documentation and more then one media installation - RT4 for future versions or emergent patches
 - Data elements some expanded to record software version data
 - DISCP Code of "V"** **SAC of "SFTWR"**
 - PRID record "*media type*"** **SN record "*serial number of media*"**
 - EIN record "*SW Identification Number*"**
 - Assign/generate CDMD-OA RICs (software RICs)
 - Incorporate NAVICP RICs (software RICs)
 - Associate software with system / hardware



PROCESS

Ability to:

- Sort CDMD-OA for software records only
- Generate NAVSEA 53 Report of installed software
- Generate VALAIDS for software validation
 - FLTILOLANT Validated Prototype Ships & VALAID



RECORDS

- CDMD-OA Software RICS
 - NAVSEA Designated Agent Assigns/Maintains Assignment
 - RIC Structure "XSFT0XXXXXX"
- NAVICP Software RICS
 - Some systems are using NAVICP generated RICs for recording software configurations
 - Modification of NAVICP generated RICs allows data to be used
- GENERIC XRICS
 - XSOFTWARE
 - Used by CDMs to capture software that is not identified within CDMD-OA
 - CDMs and cognizant ISEA interface to assign a Unique RIC



RECORDS

- Data Collected on software CM prototype systems
 - TR01
 - 169 records
 - » Records without Software Identification Numbers in the EIN Field - 3.5%
 - » Records without EDC = V and SAC = SFTWR - 11.3%
 - U.S. Navy Ships
 - 1952 other software records
 - » Records without Software Identification Numbers - 39%
 - » Records without EDC = V and SAC = SFTWR - 96.6%
 - Software Identification Number Average length - 7 characters

CRITICAL FIELDS

**SAC = " SFTWR"
"V"**

DISCPL =

**PRID = Media
Media**

SN = of

EIN = Software Version ID Number



LESSONS LEARNED

1. NAVICP RIC/CDMD-OA XRIC DATA FIELDS -

Some of the data fields did not follow requirements.

- **Solution:** *Education by phone calls and emails AND updating Enterprise Documentation and putting out the Users Guide*

2. REDUNDANT DATA ENTRY - *Prototype has flushed out un-necessary data entry duplication.*

- **Solution:** *Eliminate SW identification number in CCF. Eliminate the word 'software' at the beginning of EIN field and Nomenclature field.*



LESSONS LEARNED

3. *NHA RIC/RIN vs Parent RIC/RIN – Conflict which to use and what actually falls out on the VAL AID.*

- ***Solution:*** Use the Parent RIC/RIN data fields to tie to the hardware. Works for both the configuration record (RT2) and the VAL AID Report.

4. *Record Type 2 Data – Parent RIC and Parent Serial Number are not always loaded on RT 2.*

- ***Solution:*** Must be sure the CDM includes the Parent RIC and the Parent Serial Number in the final Record Type 2 in CDMD-OA.



LESSONS LEARNED

- **ISEA Process** – works.
- **CDM Process** – works.
- **Validation Process** – works.
- **Average Length of ID Numbers** – 7 (Seven).



STATUS

- XRICs manually issued
- Incorporating NAVICP records
- Successful initial validation of ships has been performed
- NAVSEANOTE 4130 @ HQ
 - Defines software initiative requirements
 - At Headquarters; Will promulgate once signed



STATUS

- Implementation
 - TR-01
 - 11 of 11 Ships participating
 - 21 of 25 Systems participating
 - 03 of 03 System Commands
 - Scope Increase
 - All Ships Classes participating
 - 99% of Ships
 - 36% of Subs
 - 50 Systems participating
 - 6 System Commands participating
 - All CDMs participating
 - 7 of 9 ISEAs participating
 - RMMCOs - some are working IAW the NAVSEANOTE 4130

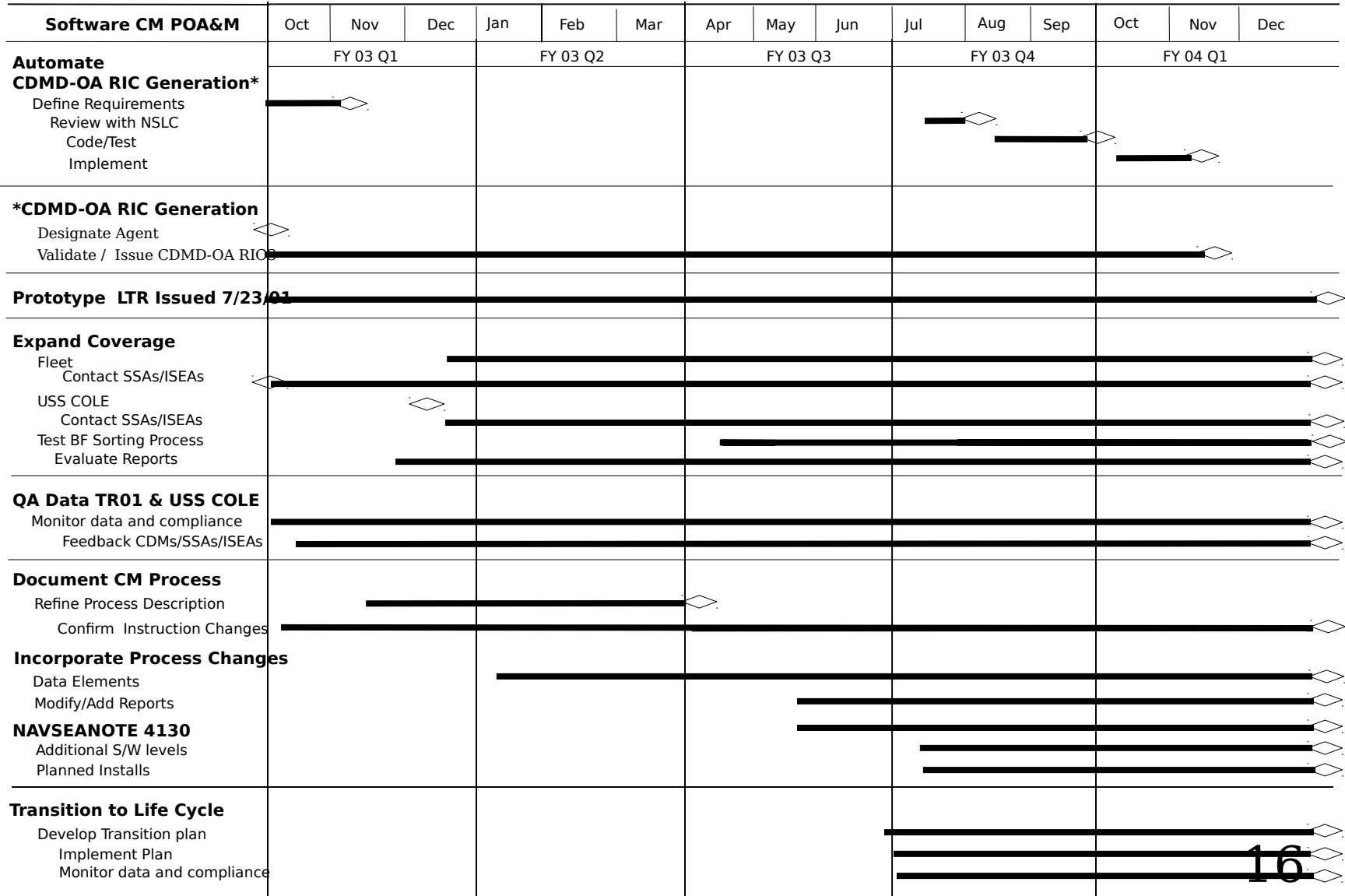


FUTURE PLANS

- Automate XRIC generation process
- Continue to incorporate NAVICP RICs
- Continue to Expand System Coverage / Expand Battle Force
- Document software CM process
 - Near Term – Issue NAVSEANOTE 4130
 - Long Term – Incorporate in NAVSEA Institutionalized Documents
- Transition to life cycle process



SW INITIATIVE POA&M





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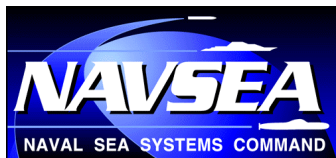
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BACK UP SLIDES



PROTOTYPE SYSTEMS/SHI

System	CVN 71 SNAP I	CG 55 SNAP II	CG 72 SNAP II	DDG 61 OPTIMIZED	DDG 71 OPTIMIZED	DD 969 SNAP II	DD 997 SNAP II	FFG 55 SNAP II	SSN 761 OPTIMIZED	SSN 768 OPTIMIZED	AOE 4 SNAP II	LHD 5 SNAP I	LPD 12 OPTIMIZED	LSD 41 SNAP II
TAS MK 23	X					X	X				X			
AN/SPS-48E	X											X		
CIFF (UPX-29)		X	X	X	X									X
AUTO ID	X													
SYS-2 IADT	X							X				X		
AN/SYQ-17 RAIDS						X	X	X						
MK 92								X						
NSSMS MK 57	X					X	X					X		
RAM MK 31												X		
CIWS MK 15	X	X	X	X	X	X	X	X			X	X	X	X
AN/SQQ-89		X	X	X	X	X	X	X						
CV-TSC SQQ-34	X													
AN/TPX-42(V)	X											X		
AWS		X	X	X	X									
RADD/ASDS	X							X			X	X	X	X
CDS/ACDS BLK 0/1	X					X	X	X				X		
SSDS MK1/2														X
GCCS-M	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C2P	X	X	X	X	X									
SGS/AC	X	X	X	X	X							X		
AN/SLQ-32(V)	X	X	X	X	X	X	X	X			X	X	X	X
NAVSSI	X(blk3)	X (blk2)	X(blk2)		X(blk3)	X (blk2)	X (blk2)							
AN/WSN-7 (RLGN)	X	X	X		X									
BFTT			X											X



DATA ELEMENTS

- ♦ RIC - XRIC used for software
 - XSFT00 + assigned number
 - Tab A - RIC NM = Software Version ID
 - Tab B - EIN = Software Version ID
 - TAB C - SW:(software Version ID):(narrative)
- ♦ EIN - Software version number - SAC - SFTWR
- ♦ NHA - EIN of parent hardware - DISCP - V
- ♦ PRID - Media - SSRC - N
- ♦ SN - Serial Number of media - DISI - A
- ♦ P RIC - Parent Hardware RIC
- ♦ P SN - Serial Number of Parent Hardware
- ♦ EFD - Parent system and software ID



RESPONSIBILITIES

- ◆ SEA0 4L5/SPM/PARM
 - Define S/W Configuration Management Process
 - Develop and implement prototype process
 - Submit SRS for required CDMD-OA changes
 - Develop and promulgate guidance for S/W CM process
 - Measure effectiveness
- ◆ ISEAs/SSAs/SPM/PARM
 - Define software configurations
 - Generate Work Files containing required S/W data
 - Measure effectiveness
- ◆ CDMs/SPM/PARM
 - Review and validate the Work Files
 - Upload the Work Files
 - Measure effectiveness